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May 19, 1995

BY HAND DELIVERY

William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D.C. 20554

Re: Computer III Further Remand Proceeding:
Bell Operating Company Provision of
Enhanced Services; CC Docket No. 95-20

Dear Mr. Caton:

On behalf of CompuServe Incorporated, the Information Technology Association of America, and MCI Telecommunications Corporation, we are filing a report prepared by Hatfield Associates, Inc. entitled The Benefits of Structural Separation: Reply for inclusion in the record of the above-referenced proceeding.

If you have any questions on this matter, please feel free to contact the undersigned.

Sincerely,

Brian Turner Ashby

Enclosure

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THE BENEFITS OF STRUCTURAL SEPARATION: REPLY

HATFIELD ASSOCIATES, INC

MAY 19, 1995

THE BENEFITS OF STRUCTURAL SEPARATION: REPLY

Hatfield Associates, Inc. (HAI) has been asked by CompuServe, ITAA, and [illegible] to respond to arguments raised in the Comment round of this proceeding in papers submitted by Dr. Jerry Hausman and Dr. Timothy Tardiff, Dr. David Teece, and Dr. Clifford Fry, *et al.*[1] Each of these papers address the costs and benefits of structural separation. The central theme of this response to those papers is that the Commission should concern itself with costs and benefits to consumers. Many arguments raised in the papers focus on the benefits and costs to individual competitors. The costs and benefits to the Regional Bell Operating Companies (RBOCs) are relevant only to the extent they influence consumer welfare.

A subsidiary theme is that in most cost-benefit analyses, there will be costs. The presence of costs arising from structural separation is not sufficient to eliminate the separate subsidiary requirement. In most cases, any costs of maintaining structural separation requirements are likely to be exceeded by the benefits. In a dynamic environment, structural safeguards that promote non-discriminatory access to the features and functions of the monopoly network will allow thousands of individual entrepreneurs an expanded ability to innovate.

Finally, the analysis must be conducted in light of known marketplace and technological developments. As papers submitted by the RBOCs show, enhanced services markets are

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[1] HAI filed a paper on behalf of these same organizations in the initial Comment round of this proceeding, Hatfield Associates, "ONA: A Promise Not Realized -- Reprise" ("Hatfield ONA Reprise"), April 6, 1995. The papers we are responding to here are Jerry Hausman and Timothy Tardiff, "Benefits and Costs of Basic and Enhanced Telecommunications Services," ("Hausman/Tardiff Report"), April 6, 1995 (submitted with Comments of six of the RBOCs); Affidavit of David J. Teece ("Teece Affidavit"), undated, (submitted with Comments of Ameritech), and Clifford Fry, James Griffin, Donald House and Thomas Saving, "The Economics of Structural Separation from the Perspective of Economic Efficiency," ("Fry, *et al*"), April 4, 1995 (submitted with Comments of US West).

competitive and developing rapidly.[2] Consumers have been well-served without extensive RBOC participation in most enhanced service markets.

THE SIGNIFICANCE OF SCOPE ECONOMIES

Dr. Teece defines scope economies as follows:

> Scope economies are said to exist if the physical or human capital employed in one activity has sufficient excess capacity (at optimal utilization levels), and sufficient flexibility, that it can be used in the service of other activities as well.[3]

This definition is, of course, entirely correct. Excess capacity is necessary for economies of scope, but it is not sufficient. If there is excess capacity for enhanced services because a network is larger than it needs to be, or because features have been built into it that are not necessary for the provision of basic services, then there are no legitimate scope economies.[4] Excess capacity leads to economies of scope only when there is both excess capacity and when the plant is optimally designed and sized for providing the other services.

Regulators have a difficult time overseeing the investment decisions of the RBOCs. Capacity (in terms of both equipment and personnel) can be installed to benefit unregulated services. Therefore, RBOC scope economy claims must be treated with great skepticism.

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[2] See Booz, Allen & Hamilton "The Benefits of RBOC Participation in the Enhanced Services Market," April 4, 1995.

[3] "Teece Affidavit," p. 3 (emphasis supplied).

[4] For example, see the testimony of Joseph Gillan on behalf of the Florida Interexchange Carrier Association, Florida Public Utilities Commission, In re: Comprehensive Review of the Revenue Requirements and Rate Stabilization Plan of Southern Bell, Docket No. 920260, filed November 8, 1993, pp. 20-26 (documents substantial excess fiber optic transmission capacity installed by Southern Bell).

False economies of scope can be built into the design and operation of the network. For example, the decision to purchase features and functions useful primarily for providing enhanced services provides the network with capacity to provide the enhanced services at a low short run incremental cost. The true cost of providing those services was incurred when the decision was made to procure those features and functions as a part of network architecture and design decisions.[5] Potentially large subsidies from basic monopoly to enhanced services are possible when this occurs.[6]

Dr. Teece recognizes that many of the benefits of real (as opposed to false) scope economies can be captured without actual physical integration. To take a basic example, the loop connecting a home or a business with the public switched network can be used for local, long distance and enhanced service calls. Three loops are not necessary to provide these services. As a result, many companies can take advantage of economies of scope in the loop.

Dr. Teece explores several situations where physical integration may be necessary to capture economies. Upon closer examination, each of these potential situations can be seen to be speculative. Counter examples can be developed to show how any real economies can be

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[5] See "Hatfield ONA Reprise," discussing the many ways in which discrimination and cross-subsidy can be built into the design of the network, pp. 29-36.

[6] The conclusion by "Fry, *et al*," that existing accounting procedures would limit cross-subsidy from basic to enhanced service to five to ten percent of enhanced service cost ignores this type of built-in cross-subsidy. In any event, a subsidy of five percent would be sufficient to do serious competitive harm, particularly in a market where a substantial portion of the total cost represents payments for access to the monopoly local exchange. Access discrimination, of course, adversely affects competition without regard to cost.

exploited without physical integration.[7] In fact, as discussed below, in some cases it can be shown that integration will hinder full development and use of the resource in question.[8]

A specific example of scope economies requiring integration cited by Dr. Teece is a situation in which:

> ...the value of scope economies is only fully realized via frequent transfer of proprietary information, such as for the purpose of developing new applications of existing technology. [9]

The example given by Dr. Teece is the integration of petroleum producers into alternative fuels such as geothermal energy. The conclusion by Dr. Teece that it would be inappropriate to limit these companies from investing in alternative technologies is largely correct. The energy industry is competitive, and the presumption should be that government should not intervene.[10]

Unlike firms in the energy industry, the RBOCs have substantial monopoly power. This automatically creates a situation in which the Commission must evaluate trade-offs. The RBOCs have the incentive and ability to use their control over access to customers to develop technologies that favor their own enhanced service applications to the detriment of all other

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[7] "Fry, *et al,*" give a hypothetical example of "cost complementarities" arising from the ability to program switches. See p. 5. They fail to realize that the Advanced Intelligent Network (AIN) is being deployed specifically to de-emphasize switch programming in favor of the programming of external processors, and that under the AIN unbundling proposals now being considered by the Commission, multiple service providers could perform this function.

[8] If there are economies that can only be exploited by the monopoly provider of service, a decision can be made to allow the firm to exploit those economies on a case-by-case basis.

[9] "Teece Affidavit," p. 4.

[10] Even in structurally competitive industries, the antitrust laws must be enforced to prevent undue consolidation of markets.

providers.[11] Given full freedom to exploit the "transfer of proprietary information," there is a high likelihood that all other providers of enhanced services will be disadvantaged.

The decision the Commission made in Computer II was a compromise between keeping the RBOCs out of enhanced service markets altogether and letting them participate subject to structural safeguards that reduce the potential for cross-subsidy and discrimination. By allowing the RBOCs to enter enhanced service markets subject to structural safeguards, the Commission hoped to reduce potential competitive problems while still allowing the RBOCs to exploit their knowledge and understanding of communications markets to develop and provide enhanced services.

The theory of Computer III was that Open Network Architecture (ONA) and the Joint Cost Rules would allow non-discriminatory access to monopoly networks and prevent cross-subsidy without the separate subsidiaries. Even if this theory is correct, in practice, the Commission's original ONA policies were not implemented.[12] The Computer II compromise will protect consumers more than the incomplete Computer III approach.

Both Dr. Teece and Drs. Hausman and Tardiff (whose Affidavit is discussed in greater detail below) point to low RBOC market shares as evidence that the competitive risks are small. There are several problems with this analysis. First, the RBOCs do not have the skill set necessary to succeed in most enhanced services markets. Enhanced services involve the

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[11] The same analysis applies to the banking, gas pipeline, and airline examples used by "Fry, *et al*," See pp. 29-33. All of these industries exhibit much more competition than the local telephone business.

[12] "Hatfield ONA Reprise," pp. 9-16

generation and manipulation of information, not transmission. The RBOCs' expertise is in basic switching and transmission (the special case of voice mail is discussed later).

Second, for the most part, the RBOCs have not aggressively pursued enhanced service markets since elimination of the MFJ safeguards. Instead of using the opportunities afforded by Computer III to enter these markets, the RBOCs have argued that the remaining MFJ safeguards are an impediment to their success in enhanced service markets. For example, the RBOCs argued that the interexchange prohibitions in the MFJ prevent them from being successful in many information service markets.[13] Successful participation in enhanced services markets in the face of the interexchange prohibition would eliminate an argument for further MFJ relief.

Third, most existing enhanced services have evolved in ways that do not depend on integration with the telephone network. The dramatically falling cost of computing power allows enhanced services to be provisioned cheaply and economically outside the telephone network. The success of the commercial on-line services such as CompuServe, Prodigy and America Online, and the success of the Internet, illustrate this point. Sophisticated RBOC switching and transmission technology is not necessary to the supply of enhanced services over the Internet or through the hundreds of on-line services that have developed. These enhanced services do depend on high quality transmission services. Reasonably priced higher speed access into the home through ISDN, Asymmetric Digital Subscriber Loop, or even Hybrid Fiber Coax Networks

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[13] US v. Western Electric, Civil Action No. 82-0192 (HHG), Memorandum of the Bell Companies in Support of Their Motion for a Waiver of the Interexchange Restriction to Permit Them to Provide Information Services Across LATA Boundaries, June 25, 1993, and the accompanying Affidavit of Jerry Hausman.

could be of enormous benefit to enhanced service providers. The RBOCs do not have to be enhanced service providers to provide these transmission services.

Finally, cross subsidy and discrimination can lead to social cost even if the RBOCs only succeed in obtaining a small market share. Any cross subsidies will harm monopoly ratepayers. Cross subsidies needed to obtain a small share of a large market could have a significant impact on ratepayers. Enhanced service provider customers can also be hurt if competitors are offered inferior access. Inferior access may not always allow the RBOC to dominate a market, but can reduce the quality and variety of services offered by competitors. If some but not all competitors are driven out of the market, the absence of those competitors can reduce competition. Consumers will also be damaged if the RBOCs delay offering features and functions to competitors until they have their own competing product available to sell in the market.

In sum, just because they may have a small market presence today does not mean that the RBOCs have lost the ability and incentive to discriminate. The enhanced service field is large and diverse. Important markets within that field may be monopolized, even while other markets remain competitive. As technology evolves, important new markets could develop. If their public policy agenda is achieved, the RBOCs could decide to substantially increase their presence in these markets through anticompetitive abuses. And perhaps most significantly, abuses will damage ratepayers and consumers even if they do not lead to large market shares. For these reasons, it is important to retain safeguards that will protect existing and evolving markets from discrimination and cross-subsidy.

Since most enhanced service markets are competitive and technologically dynamic, there will be few, if any, benefits to consumers if the RBOCs participate more fully. If the Commission

enforces its Computer II structural separation rules, it is more likely that many firms would continue to contribute to the development of enhanced services. Elimination of structural safeguards increases the likelihood that only one firm will succeed.

Mergers ". . . among long distance, cellular, and cable service providers . . ."[14] are cited by Dr. Teece as general proof that organizational integration is necessary in the telecommunications industry. Several of these mergers may be a response to exploitation by the RBOCs of their monopoly. Long distance carriers such as AT&T would not need to spend billions of dollars on wireless technology if the RBOCs would open their networks to offer new products and charge reasonable prices for the services they do provide. In any event, there are many cases in which cooperation among players is achieved without integration. Finally, the Computer II structural separation rules allow RBOC enhanced service affiliates to resell the basic services of their parents. This provides them with the ability to develop integrated products without actual structural integration..

A specific example of the benefits of integration cited by Teece is the development of the Advanced Intelligent Network (AIN).[15] This example actually illustrates the danger of integration. Dr. Teece argues that:

> The immediate result of structural constraints could very well be the inability to justify the very large costs and financial risks associated with . . . architectural modifications and the attendant costs of changes to support an open environment.[16]

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[14] "Teece Affidavit," p. 5.

[15] *Id.*, pp. 7-8.

[16] *Id.*, p. 8.

Dr. Teece's argument is confusing. The AIN is being developed and implemented precisely because the RBOCs want the ability to make changes in their network with greater flexibility. However, the RBOCs are developing the AIN in ways that will deny the full benefits of this flexibility to enhanced service providers.[17] Structural separation requirements will increase the likelihood that enhanced service providers can benefit from this enhancement to the network. Integration would make it more likely that the AIN will be developed for the primary benefit of RBOC enhanced service applications, while stifling the dynamic, innovative environment that would exist if other developers were given free reign to develop enhanced applications.

Contrary to the impression left by Dr. Teece, many firms are capable of exploiting economies of scope to provide enhanced services. Publishers, financial services firms, interexchange carriers and computer software and hardware firms are competing successfully. America Online, CompuServe, Prodigy, and literally hundreds of other competitors are succeeding without being integrated into basic services.[18] There are three possible interpretations: these firms have economies of their own to exploit; economies are not important; or telecommunications network capacity for enhanced services can be exploited without integration with the RBOC monopoly network. What distinguishes the RBOCs as enhanced service providers is that they are the only firms that combine the substantial risk of exploitation of monopoly power with alleged economies of scope

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[17] "Hatfield ONA Reprise," pp. 27-28.

[18] See Gary H. Arlen, "Online Services Pass 7 Million Mark, Up 15% in New Year," Information and Interactive Service Report, undated special report, for a discussion of firms in the on-line services field.

JOINT MARKETING

Dr. Teece argues that consumers prefer "one-stop shopping," and that application of Computer II Rules will prevent that. There are several responses that the Commission must consider. First, one-stop shopping is exactly what consumers had before the development of competition in the telecommunications industry and before the divestiture of AT&T. Divestiture caused some customer confusion and involved some substantial implementation costs, but the benefits of divestiture are widely conceded. The Commission must weigh the trade-off between the alleged benefits of one-stop shopping and the potential competitive harm that will be done if monopoly and competitive services are jointly marketed.

Second, RBOC enhanced service operators can offer one-stop shopping by reselling RBOC basic services. Customers of all of the competitors can likewise receive one-stop shopping if the telephone companies allow full resale of their services. If the telephone company is not the only firm offering one-stop shopping, RBOC shareholders may be hurt. But this is not a consumer welfare problem.

Third, and related to the last point, the RBOCs have frustrated efforts by enhanced service providers to offer their customers one-stop shopping. For example, US West did not allow competing Enhanced Service Providers to cancel US West voice mail service on behalf of their customers. Customers were forced to make a separate call. This practice is now apparently changing, but only after US West has established itself in the voice mail market.[19]

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[19] See the attached Statement of Michael Rabb, President of US Voice Corp. ("Rabb Statement") The original is on file with Hatfield Associates, Inc.

Finally, anyone who has ordered service recently knows that the time taken by customer service representatives to make monopoly telephone customers aware of all of the regulated and unregulated service options available to them is substantial. It is certainly true that the same employee can take monopoly basic service orders and market vertical features and enhanced services. However, if the only function of the employee was to take an order for service, much less time would be taken on each call, and many fewer employees would be needed. Joint marketing of this nature actually imposes costs on consumers who are not interested in buying anything other than the basic monopoly service.

Fry, *et al*, argue that pre-divestiture competition in long distance did not suffer from joint marketing: "Long distance competitors to the 'default' long distance carrier achieved growing market shares. The inconvenience of placing a call to the competitor proved to be insignificant."[20] This statement betrays a fundamental misunderstanding of competition in the long distance market. Only after divestiture eliminated the joint marketing of local and long distance calling did the long distance market become competitive. The modest pre-divestiture success of competitors was due to their ability to offer discounts of up to 50 percent as a result of Commission access charge policies.

MEASURING THE COST OF STRUCTURAL SEPARATION

Drs. Hausman and Tardiff estimate the cost of structural separation based on a premise that consumer welfare increases when services are offered earlier than they might otherwise have

[20] "Fry, *et al*," p. 7, footnote 4.

been.[21] There is no question that this premise is correct. The problems arise with the measurements.

Drs. Hausman and Tardiff use voice messaging service as an example of consumer welfare losses resulting from a delay in introduction of a service. They attempt to lay the blame for this delay, and the alleged resulting cost to consumer welfare, squarely at the feet of structural separation regulations implemented by the Commission in its Computer Inquiry II proceedings,[22] later bolstered by the MFJ's information services line-of-business restriction. In short, their summary of the Commission's findings and ruling is misleading.

Drs. Hausman and Tardiff state that "voice messaging using central office-based technology was sufficiently developed to begin operation in the early 1980's."[23] However, Drs. Hausman and Tardiff continue,

> the FCC decided that, since it was 'technically possible' to provide structurally separated voice messaging, AT&T would not be allowed to provide it on an integrated basis. Extra economic costs due to structural separation had only a minor role in the FCC decision.[24]

The clear inference is that since the technology was sufficiently developed, consumers should have had the earlier benefit of the service. Leaving aside for the moment the questionable validity of the assumption that the technology was sufficiently developed in 1981 (discussed below), Drs. Hausman and Tardiff would have one believe that the Commission essentially ignored economic

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[21] "Hausman/Tardiff Report," p. 11.

[22] In the Matter of AT&T CO Petition for Waiver of §64.702 of the Commission's Rules and Regulations, Memorandum Opinion and Order, (AT&T Waiver Order) 88 FCC2d 1 (1981).

[23] "Hausman/Tardiff Report," p. 12.

[24] *Id.*, pp. 12-13 (footnotes omitted).

considerations and based its decision primarily on the fact that the service could technically be provided on a separated basis.

The paragraph in the Opinion cited by Drs. Hausman and Tardiff for support of the contention, paragraph 53, does include the Commission's finding of technical possibility, but that is all it is -- a finding of fact. It is not the basis of the Commission's decision. Drs. Hausman and Tardiff completely ignore the next six paragraphs of the decision that lay out the reason the Commission rejected AT&T's assertions of delay and cost required to provide voice messaging through a structurally separate subsidiary. The essence of those six paragraphs is not that cost and delay were unimportant, it was simply that AT&T did not support the cost and delay arguments it made:

> We are deeply troubled by the lack of support for this judgment [AT&T's assertion that it would take three years]. The criticisms of AT&T's analysis are substantial enough to require persuasive rebuttal . . . without insight into the decisional factors . . . including the time required for implementing each of the necessary actions, AT&T's judgement in this instance appears to be highly subjective. . . .[25]

Later in the decision, and again contrary to inference by Drs. Hausman and Tardiff, the Commission devoted an entire section to a discussion of economic factors that AT&T insisted mitigate in favor of offering voice messaging on an integrated basis. Chief among those economic factors was an AT&T allegation that offering voice messaging service on a structurally separated basis would result in increased cost to consumers of as much as 75 percent. Again the Commission found that AT&T allegations were not supported by the minimal information that AT&T presented:

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[25] AT&T Waiver Order, para. 55.

> For these reasons, we find that AT&T has failed to meet its burden of showing that denial of its Petition will impose unreasonable economic cost upon consumers. Indeed, a careful reading of its showing suggests that the separate subsidiary may, very well, be able to provide CCS-II economically.[26]

The reason AT&T was not allowed to offer voice messaging on a structurally integrated basis was not, as Drs. Hausman and Tardiff allege, because the Commission blindly refused to consider the potential increased cost to consumer welfare if the service was required to be offered on a separated basis. It was because AT&T did not, for whatever reason, carry its burden of persuading the Commission that consumers would in fact be harmed by requiring voice messaging through a separate subsidiary.

Drs. Hausman and Tardiff point to the fact that voice messaging services similar to those proposed by AT&T in 1981 never developed in spite of Commission assurances that they would. They even cite two paragraphs in the AT&T Waiver Order where the Commission noted that such providers would almost certainly develop -- paragraphs 85 and 103. What they fail to mention is that in each instance the Commission notes that other entities are likely to develop similar voice messaging services if "the local telephone companies provide the requisite interconnection facilities."[27] The failure of the Commission's ONA policies, which were designed to assure such connections, is the reason this proceeding is being conducted.

Another problem with the analysis by Drs. Hausman and Tardiff is that the voice mail services now being offered by the RBOCs are based on substantially different technology from that proposed in the early 1980s. The Voice Storage System (VSS) that was under development

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[26] *Id.*, para. 87.

[27] *Id.*, paras 85 and 103.

at the time the Commission ruled voice messaging to be an enhanced service was essentially the equivalent of a mainframe-based system involving large amounts of equipment. By contrast, today's voice messaging systems can be sized according to the customer base, and are often PC or workstation-based. The development of PC technology during the 1980s means that voice messaging services are much less costly to provide than they were at the beginning of that decade. It is not at all clear that the more expensive VSS service could have succeeded in the market, absent cross-subsidy. This may help to explain why AT&T did such a half-hearted job of supporting its waiver request.

Finally, there is a substantial question whether RBOC Voice Mail service is profitable. In Colorado, US West charges $6.95 for residential Voice Mail Service. US West charges its competitors $1.05 for Call Forward Busy Line/Don't Answer, an essential input into the service and a feature included in the $6.95 rate for U.S. West's voice mail service. With the remaining $5.90, US West must recover its extensive advertising and marketing expenses, pay for personnel, equipment, and network transport, and provide customer service, including billing.[28] One way to show a profit is to implicitly charge itself a low incremental cost for these functions on the assumption that the capacity already exists. As discussed above, however, ratepayers may well be financing the excess capacity. If the RBOCs are achieving mass-market penetration because the service is priced too low relative to the true economic cost of the components, they cannot claim full social welfare credit for offering the service.[29]

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[28] See "Rabb Statement."

[29] Of course, a low final service price does not necessarily mean low RBOC profits. If the inefficiently provided connections are transferred to the RBOC enhanced service operation at low prices, excess profits are still possible.

Drs. Hausman and Tardiff also provide a highly speculative analysis of the alleged costs of the RBOCs not offering services such as distance learning. Their own analysis shows that the enhanced service markets are technologically and competitively dynamic. The RBOCs are now free to offer information services. Due to the dramatic increase in low-cost computing power, modern information services are being offered in ways that do not require telephone network integration. If services are being delayed, then lack of market demand, inadequately developed technology, or inadequate connections to the network because of the failure of the RBOCs to comply with their ONA obligations (or to overprice the connections they do offer) must be responsible.

As noted in our earlier paper, many features and functions requested by enhanced service providers have not been offered by the RBOCs. Many of those that are available are not offered on a ubiquitous basis. Consequently, enhanced service providers are unable to offer some services and must incur unnecessary costs to offer others. In addition, as noted in our earlier paper, even where connection services are offered, they are very expensive. If the RBOCs were to establish cost-based prices for their interconnection services, social welfare would increase dramatically.

Drs. Hausman and Tardiff also argue that the "regulatory imbroglio" surrounding RBOC efforts to free themselves of structural safeguards has "created significant social costs."[30] Accepting the claim arguendo, what they fail to acknowledge is that these costs are of the RBOCs' own making. Had the RBOCs been willing to accept their role as suppliers of low cost access to customers, these litigation costs need not have been incurred. One interpretation of the

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[30] "Hausman/Tardiff Report," p. 7.

RBOCs' willingness to accept their share of these claimed significant costs is that they anticipate substantial monopoly rents if successful.[31]

The final point made by Drs. Hausman and Tardiff is that there are substantial operational costs associated with structural separation.[32] There may be one-time costs of rearranging services to comply with necessary regulatory safeguards. But these costs would not have been necessary had the RBOCs complied with their original promises in Computer III. This is a penalty associated with RBOC bait and switch tactics.

Some alleged ongoing economies cited by Drs. Hausman and Tardiff may be due to the RBOCs providing themselves services at or below incremental cost, while charging their enhanced service provider customers rates that substantially exceed costs. Other alleged economies cited by Drs. Hausman and Tardiff are simply implausible. They use an example of a US West study showing the additional cost of a building to house enhanced service operations.[33] US West owns literally thousands of buildings. The White Pages show that US West's regulated offices in Denver are in several buildings.[34] If there were economies associated with putting employees in

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[31] See Richard A. Posner, Antitrust Law and Economic Perspective (1976), pp. 8-22, for a discussion of the costs of acquiring a monopoly position.

[32] "Hausman/Tardiff Report," pp. 20-25

[33] Comments of US West, Attachment 4, "Structural Separation of Enhanced Service Offerings," prepared by US West Management Information Services, March 29, 1995, p. 24, which purports to show that the cost of establishing a structurally separate entity for enhanced service provision is 90 million dollars. Most of this 90 million dollars is a capital cost. The annual carrying cost associated with this investment is obviously much smaller. Moreover, the assumption that all of the enhanced service infrastructure equipment and support personnel are shared costs could only be true if the existing US West infrastructure contains substantial excess capacity.

[34] Interestingly, a separate address is shown for U S West Enhanced Services, Inc.

the same building, then their regulated operations would not be as geographically dispersed. Any so-called savings to enhanced service operations cited by Drs. Hausman and Tardiff are likely due to excess capacity in the regulated operations, financed by monopoly ratepayers.

In the same spirit as the discussion of costs of separation by Drs. Hausman and Tardiff, William Neal on behalf of NYNEX argues that the cost of eliminating structural separation for Voice Mail services would be prohibitively high.[35] As noted above, one time costs of separation are due to the failure of the RBOCs to comply with their original ONA promises. In any event, most of the costs Mr. Neil describes are the result of moving equipment out of central offices. The RBOCs argued strenuously against providing collocation for enhanced service providers. Had the RBOCs made collocation for enhanced service providers available, they would not have to make all of the network changes Mr. Neil describes.

Finally, even assuming that the RBOCs might incur ongoing operational costs associated with conducting physically separated operations, these are social costs only if consumers have to pay more for products and services as a result. The existence of the dynamic, highly-competitive market that will result from maintaining structural safeguards may lead to more innovative services at lower costs. The resulting consumer welfare benefits are likely to outweigh any negative effects of increased operational costs (if any) on the RBOCs. As discussed above, other firms have access to economies of scope, and the market is generally competitive. If the RBOCs are inefficient, then they should not provide the services.

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[35] See Affidavit of William B. Neil, April 6, 1995, pp. 7-11.

THE NEED FOR STRUCTURAL SAFEGUARDS

Dr. Teece, Drs. Hausman and Tardiff, and Dr. Fry, *et al*, all argue that non-structural safeguards are working to prevent discrimination. These arguments were anticipated and discussed in our earlier paper, and will not be repeated here.[36] It is worth noting, however, that Dr. Fry, *et al*, argue that ONA is a necessary safeguard:

> As the enhanced services market evolves, individual suppliers of enhanced services may only require one or a few individual access services. Under ONA they are guaranteed the right to purchase just these services at the long-run incremental cost of providing them.[37]

This is a description of ONA in theory and not ONA in practice. As noted in our previous paper, the Common ONA Model actually frustrates the ability of enhanced service providers to purchase only the access services they need. Moreover, the services that are available are very expensive.[38]

A particular example of the failure of unbundling principles is the pricing of US West's "call transfer" service, which is a service element that can be used in providing voice mail. US West prices its call transfer feature at $6.00 per month. When the same feature is bundled with other features in a service called "Centron," the entire service package is only $5.00 per month.

Dr. Fry, *et al*, also argue that structural separation does not help to prevent RBOC discrimination. They maintain that "the benefits of discriminatory behavior are the same whether or not the BOC's enhanced subsidiary is structurally separate."[39] This is correct. However, they

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[36] "Hatfield ONA Reprise," pp. 36-44.

[37] "Fry, *et al*," p. 26.

[38] "Hatfield ONA Reprise," pp. 12-13.

[39] "Fry, *et al*," p. 17.

fail to consider that the arms-length dealing required by structural separation makes it more difficult for the basic service provider to devise and implement discrimination. If the separate subsidiary must interconnect in the exact same manner as unaffiliated providers and share information on an equal basis, discrimination is less likely to occur. It is true that discrimination is still possible with structural separation. But structural separation will make discrimination more difficult.

ATTACHMENT

Statement by Michael Rabb, US VOICE CORP, PO Box 11011, Boulder, CO 80301, 303-530-5100, May 18,1995

My experience with US West and ONA --

My company, US VOICE CORP is a small voice mail service which operates in the Denver "metro" area. My company began operations in 1990 at about the same time that US West began offering voice mail. I believe that my company fits the definition of an "Enhanced Service Provider", a term associated with Open Network Architecture.

My experience in competing with US West has been one of frustration. As a competitor with, AND a subscriber to US West services, it is certainly a different environment than what is typical of most competitive business situations. Given this unusual business environment, it is frustrating to attempt to participate in a market place completely dominated by one company who does not seem to play by the "rules".

By ONA rules ESPs should have the same access, at the same cost to unbundled network service elements and arrangements as the monopoly phone company. Competing against the monopoly would be difficult even with this "level playing field" for cost and features. Even if its enhanced services operation was a structurally separate entity, US West's actual business costs and operational relationships would be suspect of cross subsidy. But in the mode of a merged, non-structurally separate business operation, US West's enhanced services operation, cross subsidy is unavoidable, and gives US West a huge advantage over independent ESPs. Cost and feature provisioning of ONA service elements are not equal for ESPs relative to the advantage available to the phone company. In my opinion, US West has abused for its own advantage, the letter and intent of ONA.

For example:

1. ONA service elements are not priced appropriately.

Item A: One service element used in providing voice mail service on a subscribers line is "call transfer". US West charges more for the separate service element of call transfer than when it is bundled as "Centron" service. US West prices its call transfer feature at $6.00/mo. However when the same feature is bundled with other features in a service called "Centron" the entire service package is only $5.00/mo.

Item B: US West charges more for inter-office call forwarding than it does for intra-office call forwarding. This puts independent ESPs at an inherent disadvantage. To offer voice mail coverage on a subscriber's line with inter-office call forwarding, my company must price its voice mail significantly below US West's service, just to make up the differential created by the more expensive inter-office call forwarding feature.

To avoid the more expensive inter-office call forwarding, private network facilities are required to each subscriber's serving central office from the ESP's point of presence. The costs involved with this intra-office approach are prohibitive for any but a huge local phone company that has the infrastructure and facilities available to support such an expensive approach. As a ancillary issue, I question whether US West charges itself effectively and appropriately for all of the network transport costs involved in implementing the intra-office approach.

2. The lack of structural separation within US West for its enhanced services offerings and its basic phone services has led to repeated violations of the spirit of ONA/Computer II and has put my company under a severe disadvantage in the market place.

Item A: US West embeds in its invoices, advertising and solicitation for its enhanced services. When a prospective phone service subscriber calls US West for phone service, the same clerk that takes the order for dial tone offers other services including voice mail. The clerk has access to all of the customer's network information. US West's massive telemarketing campaigns target new phone subscribers. Unlike independent service bureaus, US West's telemarketers have all the network information available to market their service. How are all of these marketing and administration costs allocated?

Allocation of costs between the enhanced service operation and regulated phone service operations is unknown and unlikely to be fair. How can the clerk's time apportioned between enhanced services and regulated? How is computer resources and support services costs allocated?

Item B: True network costs for provisioning voice mail are not assigned appropriately. US West charges 6.95 for residential voice mail. This price includes the "unbundled" call forwarding fee of $1.05. This means the remainder of the voice messaging price, $5.90, must "pay" and account for all of US West's expense in providing the enhanced service and any net profit. The expense items which must be paid for include not only the cost of the voice mail system/platform but also all network transport cost, including all cost elements in implementing the voice mail-to-CO integration. In addition the $5.90 must also pay for all administrative, overhead, maintenance and marketing expense.

If it were possible to do true cost allocation for all of these components, it could be shown that US West is not recovering its costs for providing residential voice mail. Of course, true cost allocation in a non-structurally separate situation is impossible and the cross subsidy of enhanced services by basic phone service goes unchecked!

3. For several years, order processing support for ESPs has been unfair. Until recently, an ESP could not order the deletion of US West voice messaging service on a subscriber's line. Even with written authorization as the subscriber's "agent", US West Interconnect Services would not execute orders from the ESP to delete US West voice messaging. US West required the subscriber to personally order the deletion of their voice mail service. US West, on the other hand, could take anyone's order to delete an existing ESP service. Recently (last 6 months) US West has changed this policy to accept ESP orders to delete its voice messaging service, but this policy has not been implemented consistently for all of its Interconnect Services centers.